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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/055,901	01/28/2002	Masatoshi Kokubun	024014-00003	2050

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EXAMINER

VIEAUX, GARY

ART UNIT	PAPER NUMBER
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2612

DATE MAILED: 02/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/055,901	Applicant(s) KOKUBUN ET AL.	
	Examiner Gary C. Vieaux	Art Unit 2612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 04 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 10 and 13-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☒ Claim(s) 6-9, 11 and 12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 January 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>1/28/02, 11/19/03</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Applicant's response to the Restriction Requirement of November 4, 2005, has been received and made of record. Election without traverse was made in relation to
5 the fourth species (IV), drawn to fig. 6, and as applied to by claims 9, 11, and 12. Claims 10, and 13-16 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species.

Information Disclosure Statement

10 The information disclosure statements (IDS) submitted on the following dates are in compliance with the provisions of 37 CFR 1.97 and are being considered by the Examiner: January 28, 2002; and November 19, 2003.

Drawings

15 Figures 1 and 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct
20 any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

- 5 (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by

- 10 Panicacci et al. (Programmable Multiresolution CMOS Active Pixel Sensor), with Mendis et al. (Progress in CMOS Active Pixel Image Sensors) provided as supporting documentation based on an incorporation by reference.

Regarding claim 1, Panicacci discloses a CMOS Active Pixel Sensor array an image averaging circuit for carrying out an averaging processing of the image data
15 outputted from at least two of the plurality of pixel regions (figs. 4 and 5, sections 2.1 and 2.2; Mendis – section 2.2.)

Regarding claim 2, Panicacci discloses all the limitations of claim 2 (see the 102(b) rejection to claim 1 supra) including wherein the image averaging circuit carries out the averaging processing of the image data of the plurality of pixel regions on the
20 predetermined one of the horizontal selection lines (fig. 4, section 2.1.)

Regarding claim 3, Panicacci discloses all the limitations of claim 3 (see the 102(b) rejections to claim 1 or 2 supra) including wherein the image averaging circuit carries out the averaging processing of the image data of the plurality of pixel regions on the predetermined one of the vertical selection lines (fig. 4, section 2.1.)

Regarding claim 4, Panicacci discloses all the limitations of claim 4 (see the 102(b) rejections to claim 3 supra) including wherein the image pickup device further comprising a noise cancel circuit for removing a noise superimposed on the image data, wherein the image averaging circuit is disposed in the noise cancel circuit (fig. 5, section 5 2.2.)

Claims 1-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Fossum et al. (US 5,949,483.)

Regarding claim 1, Fossum discloses a CMOS Active Pixel Sensor array
10 an image averaging circuit for carrying out an averaging processing of the image data outputted from at least two of the plurality of pixel regions (figs. 7-10, col. 10 line 21 – col. 14 line 41.)

Regarding claim 2, Fossum discloses all the limitations of claim 2 (see the 102(b) rejection to claim 1 supra) including wherein the image averaging circuit carries out the
15 averaging processing of the image data of the plurality of pixel regions on the predetermined one of the horizontal selection lines (figs. 7-10, col. 10 line 21 – col. 14 line 41.)

Regarding claim 3, Fossum discloses all the limitations of claim 3 (see the 102(b) rejections to claim 1 or 2 supra) including wherein the image averaging circuit carries
20 out the averaging processing of the image data of the plurality of pixel regions on the predetermined one of the vertical selection lines (figs. 7-10, col. 10 line 21 – col. 14 line 41.)

Regarding claim 4, Fossum discloses all the limitations of claim 4 (see the 102(b) rejections to claim 3 supra) including wherein the image pickup device further comprising a noise cancel circuit for removing a noise superimposed on the image data, wherein the image averaging circuit is disposed in the noise cancel circuit (figs. 7-10, col. 10 line 21 – col. 14 line 41.)

Regarding claim 5, Fossum discloses all the limitations of claim 5 (see the 102(b) rejections to claim 1 or 2 supra) including wherein the noise cancel circuit includes, for each of the vertical selection lines, a correlated double sampling circuit in which an electric charge corresponding to the image data after removal of the noise is held in a first capacitance (fig. 10, col. 14 lines 22-36, in a non-differential output circuit.)

Allowable Subject Matter

Claims 6-9, 11 and 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claims 6-9, 11 and 12, the prior art is not found to teach or fairly suggest, in combination with the claims from which dependence is derived, an image pickup device wherein the image averaging circuit includes a first averaging processing switch for connecting a plurality of the first capacitances to average a plurality of the electric charges.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Miyawaki et al. (US 5,663,555) discloses combining signals from a plurality of
5 image sensors.


Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gary C. Vieaux whose telephone number is 571-272-
10 7318. The examiner can normally be reached on Monday - Friday, 8:00am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, NgocYen T. Vu can be reached on 571-272-7320. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the
15 Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic
20 Business Center (EBC) at 866-217-9197 (toll-free).

Gary C. Vieaux
Examiner
Art Unit 2612


NGOC-YEN VU
PRIMARY EXAMINER